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Northwestern Division

Columbia River Update

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The Columbia River is the dominant water system in the Pacific Northwest. The Corps of Engineers and other federal agencies are charged with managing the Columbia-Snake river system to best serve the needs of the region and fulfill the requirements of law.

This periodic report will focus on how the current hydrologic situation and energy emergencies affect reservoir operations in the Columbia Basin and resultant impacts on listed species, power, and other project purposes.

Power emergencies affect fish survival

Since December, Bonneville Power Administration has requested increased power generation at Corps of Engineers and Bureau of Reclamation dams to help meet an imbalance in power load and supply on the West Coast.

When wintertime power emergencies are declared in a low water year and stored water is released to increase flows for more generation, spring and summer flows for fish migration may not be available.

Drawing reservoirs down below recommended levels now means there will likely not be enough water to refill the projects to the levels needed to help fish in their downstream journeys to the ocean in Apr. through Aug.

Power emergencies affect reservoir operations required by the NMFS Bi-Op

The National Marine Fisheries Service Biological Opinion calls for federal river operators to operate the system to provide a high probability of storage project refill. The 2000 Bi-Op has recommended April 10 as the date to meet the refill target, or flood control upper limit, to provide maximum flows for listed fish that migrate in the springtime.

The Bi-Op also sets June 30 of each year as the date to have the federal reservoirs full in order to provide maximum water releases, or flow augmentation, for fish that migrate downstream primarily in July - Aug.

However, when significant amounts of water are used to meet West Coast energy requirements, and runoff volume forecasts are far below normal, Corps projects will not be able to refill to target levels to aid fish. Corps officials say there is less than a 75% probability of being able to meet the Apr.10 or June 30 refill points.

The bleak outlook for April refill means there may be insufficient water available this spring for flow augmentation and, depending on the snowpack, little, if any, available for increased flows in July and August for juvenile and adult fish.

The scarcity of water may also reduce the fish spill program this year. Spilling consists of diverting water over the dam spillway rather than using it for power. Fish in the river are spilled, or passed, over the spillway rather than through or around the powerhouses.

Power emergencies affect the Corps ability to meet Bi-Op performance standards

When water meant for fish is diverted for generation in an emergency, action agencies may have a difficult time meeting the BiOp's performance standards for fish survival.

Operation outside the Bi-Op is allowed under some circumstances, but NMFS and the region's Technical Management Team of state and federal agencies must agree to changes in river system operations and impacts to fish.

This winter's energy crunch may provide a glimpse of times ahead where there is not enough water to meet power demands and the requirements of the 2000 NMFS BiOp.

A recent study by the Northwest Power Planning Council said that the region may well experience similar energy shortages in the next few years. To avoid serious power emergencies and keep prices moderate, the report says an additional 3,000 average MW of new generation is needed by 2003.

That is also the date selected for the first BiOp "check-in" to determine the success of federal action agencies in meeting performance standards to increase salmon survival as called for in the NMFS BiOp. If listed salmon stocks show decline and a failure report is issued by NMFS, additional actions for the hydro system could be triggered, among them a possible push to obtain Congressional authorization for breaching dams on the Columbia or Snake rivers.

CURRENT SITUATION

Reservoir Elevations - Approx. (in feet)

	3/31 Flood Control	Today
Libby	2423	2409
Grand Coulee (BoR)	1283	1247
Dworshak	1509	1516
Hungry Horse (BoR)	3533	3512

Reservoir Operations for week of Jan.22

- BPA will emphasize voluntary energy conservation and work with aluminum companies to achieve load reductions.
- Increase hydropower production
 - Flow at Bonneville will average 150 kcfs (not to exceed 160 kcfs).
 - Draft at Grand Coulee will not exceed the 1.3 foot daily draft limits. Target elevation 1240' or higher for the end of January.
- Draft water from Libby and Dworshak
 - Dworshak – On 22 Jan., go to 6 kcfs to potentially last until end of January (typical January flows are 1.3kcfs).
 - Libby – Increase in flows of up to 10 kcfs negotiated with Canada via a pass-through of water at Kootenai Lake.

Water Supply Forecast

The National Weather Service's River Forecast Center has issued its mid-month forecast, showing a trend to an even more dismal water supply outlook. While the official forecast predicted a 76% of average runoff for Jan.-July at The Dalles assuming normal precipitation, the new numbers show a dramatic drop in water supply.

The runoff volume past The Dalles Dam may be as low as 68% of average for Jan.-Aug., with observed streamflow into the reservoir at just 55% of average. Lower Granite Dam on the Snake River and Grand Coulee Dam on the upper Columbia may see less than 70% of volume for Jan.-July.

Snowpack and Precipitation

Columbia Basin snowpack this year is less than 60% of the 30-year historical average, with lows of 40% of average observed in some of the subbasins.

The snow-water equivalent is the amount of water stored in the snow available for runoff in the spring and summer. During the high water years of 1996 - 2000, snowpack ranged from 140%-220% of average in many Columbia sub-basins. Plenty of water allowed much more generation at Federal dams and power transmitters had excess energy to sell outside the region.

Since October 1, precipitation above The Dalles Dam has been about 65% of normal, with some areas of Montana and Idaho receiving only 40-50% of normal precipitation.

Natural streamflows are down, too, at less than 60% of normal. Outflows at Lower Granite Dam on the Snake River are averaging 19 kcfs this month, compared to 35 kcfs a year ago. At Bonneville Dam, flows that averaged 205 kcfs in Jan. 2000, are running 135 kcfs for January 2001.

Megawatt Summary

For the week ending Jan. 21, Federal generation in MW-Hours per week reached 119,093 with an average of 7137 MW.

Website: <http://www.nwd-wc.usace.army.mil>

For more information, call Public Affairs @ 503-808-3710